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Artikel

Analisa Perancangan Sistem Informasi E-Commerce Dengan Metode Object Oriented dan ISO 9126 pada PT.Samudera Semesta Sejahtera

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KEYWORD

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 ISO 9126
 Object Oriented

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A B S T R A C T

PT. Samudera semesta sejahtera is a freight forwarding company that handle export and import. The main problem is the document of export such as : there still promoting their service via telephone by the office and by the email. Also sometimes they miss the documents that sometimes will be need back. Manual booking, e-commerce using unified modelling language (UML); activity diagram, usecase diagram, sequence diagram, and class diagram. Using object oriented and iso 9126, the programming language that use in this e-commerce system is PHP and database MySQL. The result of this e-commerce is for business, making easier to search data or information, and printing a report.

INTRODUCTION

Information system now a days are incrising significantly, and a lot of people use it. Information system is helping to work, and also making it a benefit for a company. one of the system information that has been developed is web based or e-commerce. Information system or e-commerce in PT. SSS need a system information that support the business. PT. SSS established on 2000 in North roa malaka no 53 jakarta. This company contains Manager Import, Manager Export, Manager Accounting, Document Import, Document Export, Staff Accounting, Operasional. the main problem of PT. SSS are on export document ; (a) Still promoting service via telephone from the company's email or phone. (b) Sometimes the employee loss the document that need in

the future. (c) Manual booking by phone of email. Based on the issue that document's export have, so the owner of the company have an idea to develop the website that consist of activity diagram. Programing programme that need to use is PHP. The database that use is MYSQL using object oriented. This aplication being tested using software ISO 9126 to measuring the quality of the software. Information system of e-commerce hopefully meets customer's requirement.

1. LITERATURES REVIEW

The previous research that use for the guidance is for supporting this problem. Researched about ISO 9126 and object

oriented is having a lot of people that do it, especially on colleagues. The example is [1]. On that research is being explain that using manual system is the weakness of human being. the media promotion still using the pamflete , advertisement on the news paper, using baliho. The way the company promoting seems not effective, the way out is to creating new website system, the method that need to be develop is using method (TERAPAN) on this system, is to implement analisyst system with object oriented also for quality software for implementated ISO 9126

2. FRAMEWORK

Following are the considerations made :

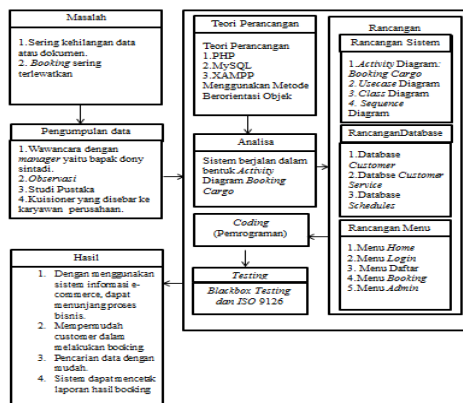


Image. 1 Framework

3. METHODS

3.1. Definition Of E-Commerce

Electronic commerce is “ sell-buy things” , sellingand offering a service thru electronic system. Such as radio, television, andcomputer network or internet. So e-commerce is a selling and buying transaction that done on internet where the internet I is using for a place to do that process. Using this system can be advantage between the customer and the seller [2].

3.2. Objek Oriented

Object oriented is “a programme that will be oriented by object”, the purpose of OOP being created is for make easier of the programmer to develop the program with following the daily model. So with this implemented of object oriented make developing the software become easier [3].

3.3.CodeIgniter

Codeigniter is a framework of PHP programing language that created by rick ellis on 2006 whom also thefounder of ellis, framework php that created based on model view controller. With model view controller (mvc) , make a possible way to separate layer application logic and precentation. So the developer of the webmaster can be focus on the core of the web [5] in code igniter, there is some implementation of MVC as below :

a. Model

A based on code of OOP class that use to do database.

b. View

Is a view html/xml or php to showing the data on browser

c. Controller

A code program for oop class that use for controlling application flow (to control model and view)

3.4. ISO 9126

ISO 916 is a quality product of softwar, model, characteristic and a metric that use for measuring for the quality of a software [4] standar of ISO 9126 already update for making better computer’s software.

Table 1. Software Quality Measurement ISO 9126

Variabel	Sub-Variabel	Indikator Pengukuran
<i>Functionality</i>	<i>Suitability</i>	Kesesuaian sistem dengan kebutuhan
	<i>Accuracy</i>	Keakuratan informasi yang dihasilkan oleh sistem
	<i>Security</i>	Keamanan data dan pengguna
	<i>Interoperability</i>	Integritas dan akses sistem dengan perbedaan teknologi yang digunakan
<i>Reliability</i>	<i>Maturity</i>	Rendahnya tingkat kesalahan dalam sistem
	<i>Fault tolerance</i>	Kemampuan untuk berfungsi seperti biasa setelah terjadi kesalahan
	<i>Recoverability</i>	Kemampuan sistem untuk mengatasi kesalahan yang terjadi
<i>Usability</i>	<i>Understandability</i>	Kemudahan sistem untuk dipahami
	<i>Learnability</i>	Kemudahan sistem untuk dipelajari
	<i>Operability</i>	Kemudahan sistem untuk dioperasikan
	<i>Attractiveness</i>	Kenyamanan pengguna dalam menggunakan sistem
<i>Efficiency</i>	<i>Time Behavior</i>	Kecepatan respon dan waktu pengolahan
	<i>Resource</i>	Kesesuaian penggunaan sumber daya
	<i>Behavior</i>	

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3.5. Unified Modelling Language

Is a programming language that using in the industry to make a definition about requirement, analysis and making a design, also for an illustrated in object's oriented program. UML cannot decide that method that we can use on system, but only a temporary decision that can be accepted for the modeling . in UML there is 13 kinds of diagram that being combined into 3 category [3] : structure diagram, behavior Diagram and interaction diagram. In UML, there is much diagram that we can use, such as : Usecase diagram, Activity diagram, Sequence diagram and Class diagram.

3.6. Definition Of Web

Web is “ a system with an information that containing words, picture, videos, voices, etc and this is keep in a website's server that is being available on hypertext. Web can be open by a client;s website software that is call by browser.

3.7. Definition Of Data

Data are all information that user can get from someone whom user can make them a response or anything comes from document, that can be preferred as a note or other form for research [7].

3.8. Definition Of Informasi

Information is a data that already compiled to giving some data and help to make a better decision as a quality and quantity fro adjusting the information. Information based on French language that is informacion. That word was taken on latin language “informationem” which has can be described as “ concept or idea” [8].

4. RESULT

Data colect by result of respondent instrument (questionnaire) will calculate with persentage :

$$\% \text{ skor} = \frac{\text{actualscore}}{\text{idealskor}} \times 100\%$$

As data analysis from questionnaire, here the result of quality testing based on 4 aspect of soft ware ISO 9126:

Table. 2 Conversion Scale Likert

No	%	Kriteria
1	0,00 – 20,00	Tidak Baik (1)
2	20,01 – 52,00	Kurang Baik (2)
3	52,01 – 68,00	Cukup Baik (3)
4	68,01 – 84,00	Baik (4)
5	84,01 – 100	Sangat Baik (5)

Table. 3 Result ISO 9126

Aspek	Skor Aktual	Skor Ideal	%Skor Aktual	Kriteria
Functionality	174	180	96,66%	Sangat Baik
Usability	562	750	74,93	Baik
Efficiency	1363	1900	71,73%	Baik

Forth aspect of Reliability use LoadImpact :

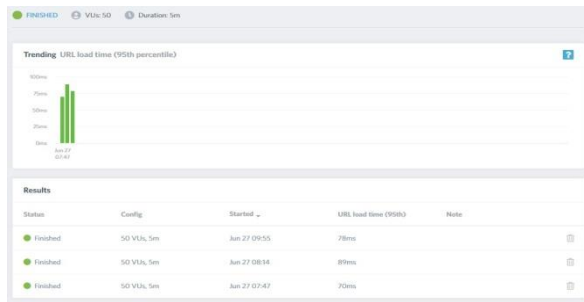


Image. 2 Test Reliability

After test with Singapore server access, during 5 minutes for access speed like request and response Vus degree or same as 50 users and get first load time testing score with standart method 70ms (second mille), second testing use standart method 89ms (second mille), third testing get 78ms (second mille), the conclusion web speed average is 70ms. Standart method as same as load method.

5. DISCUSSION

5.1. Design analysis with usecase diagram

Usecase diagram that use in this system explain about proposal system to simplyfy system to advise

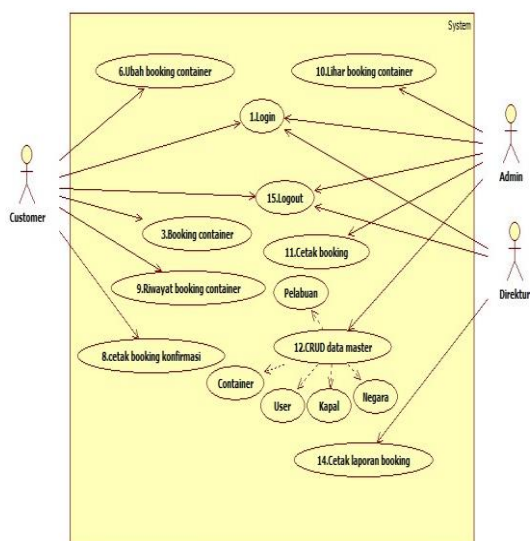


Image. 3 Usecase Diagram

5.2. Activity Diagram

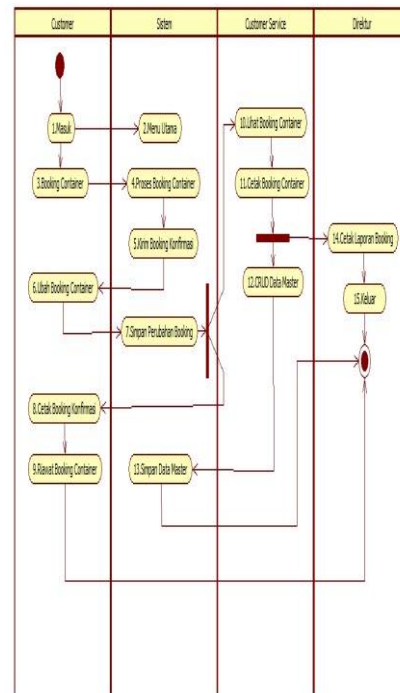


Image. 4 Activity Diagram

5.3. Sequence Diagram

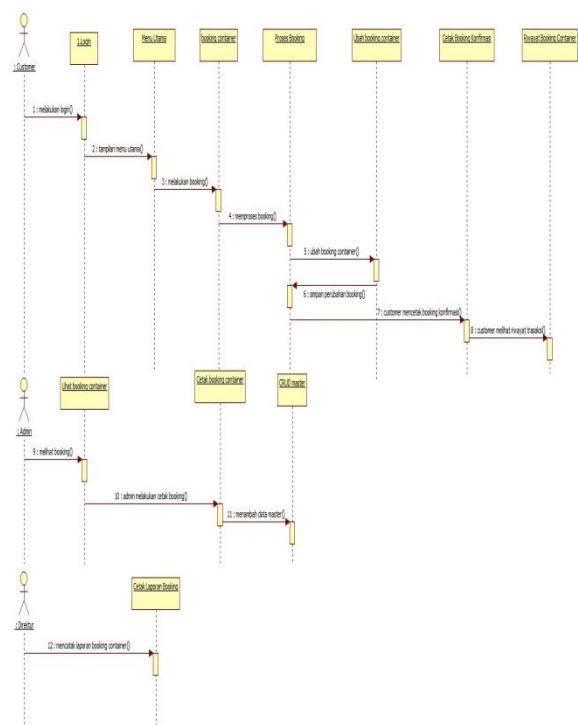


Image 5. Sequence Diagram

5.4. Class Diagram

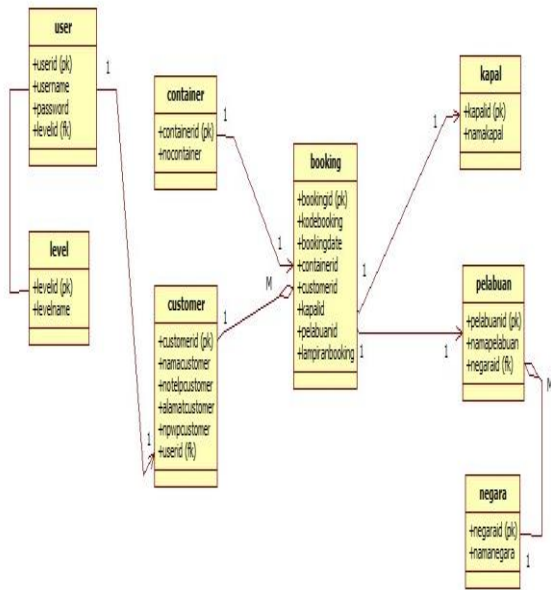


Image. 6 Class Diagram

5.5. User Interface

The following are some of the user interfaces / views of website have been created or implemented :



Image. 7 Main Menu Design

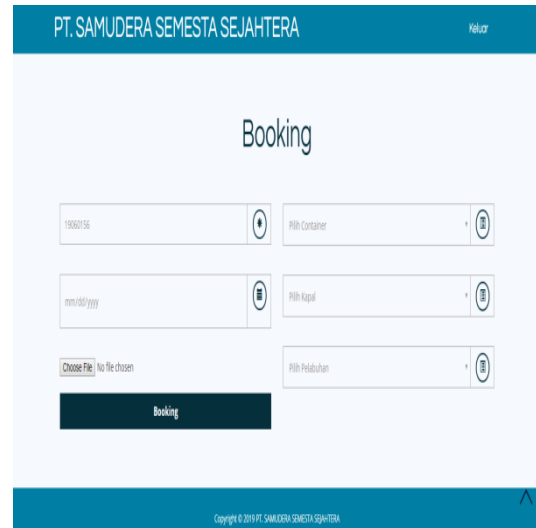


Image. 8 Registration Menu

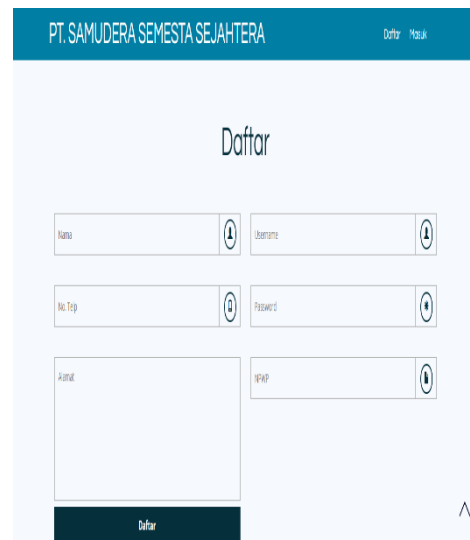


Image. 9 Booking Menu Design



Image. 10 Booking Menu Design

LAPORAN BOOKING

Dicetak Oleh :
Tanggal Cetak : 2019-06-28

No.	Kode Booking	Tanggal	Kapal	Pelabuhan	Container
Data Kosong.					

Image. 11 Report Design

6. CONCLUSION

Based on result information system design e-commerce in PT. SSS the conclusion is :

- a. Information system e-commerce that build up can increase export and import business
- b. Information system e-commerce can simplify customer do booking and access website without time and space
- c. Simplify use to search data or information they need
- d. Information system e-commerce, owner can print report for booking confirmation and do not worry if data can not find or damaged.
- e. Quality result test based aspect in ISO 9126, SUCH :
 1. SOFTWARE QUALITY aspect functionality show that function suitable for demand, with percentage 96,66% (very good)
 2. Software quality usability aspect in good category with percentage 74,93%
 3. Result reliability use singapore access server with 50 respondent and get first load and get first load time testing score with standart method 70ms (second mille), second testing use standart method 89ms (second mille), third testing get 78ms (second mille),

the conclusion web speed average is 70ms. The conclusion web speed access 70ms(second mille)

4. Software quality efficiency good enough with percentage score 71,73%

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BIOGRAPHY

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